DOCUMENT RESUME

ED 200 700 UD 021 368

AUTHOR Irizarry, Ruddie A.; And Others
TITLE Fort Hamilton High School Project GRASP. ESEA Title VII. Final Evaluation Report, 1979-1980.
INSTITUTION New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation.
SPONS AGENCY Office of Bilingual Education and Minority Languages Affairs (ED), Washington, D.C.
BUREAU NO 50014207613
PUB DATE 80
NOTE 66p.; For related documents see ED 142 656, UD 021 356, UD 021 358, UD 021 360, UD 021 362-363, UD 021 382-383.

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Achievement Gains; *Arabs; *Bilingual Education; Class Organization; Community Involvement; Curriculum Development; Curriculum Evaluation; English (Second Language); Ethnic Groups; *Greek Americans; *Hispanic Americans; Native Language Instruction; *North Americans; Parent Participation; *Program Effectiveness; Program Evaluation; Secondary Education; Second Language Instruction; Staff Development
IDENTIFIERS Criterion Referenced English Syntax Test; Elementary Secondary Education Act Title VII; New York (Brooklyn)

ABSTRACT

This report is an evaluation of a Title VII Bilingual Program conducted at the Fort Hamilton High School in Brooklyn, New York, in 1979-1980. This bilingual program provided instruction for Greek, Spanish, and Arabic speaking students. The ethnic and economic composition of the neighborhood and of the school population are discussed, and the program's objectives, funding sources, and uses of those funds are examined. The program is analyzed in the following areas: (1) class organization; (2) curriculum and materials development; (3) staff development; (4) parental and community involvement; (5) supportive services; and (6) affective domain. Tables are presented measuring each student ethnic group's achievement level in social studies, science, mathematics, and English and native language development. The tables also indicate students' performance on the Criterion Referenced English Syntax Test (CREST). The report concludes with a positive assessment of the program. (APM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

APR 1 - 1981

ED200700

FINAL EVALUATION REPORT

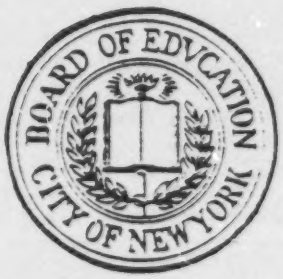
FORT HAMILTON HIGH SCHOOL

PROJECT GRASP

ESEA TITLE VII

PROJECT 5001-42-07613

1979-1980



NEW YORK CITY PUBLIC SCHOOLS

OFFICE OF EDUCATIONAL EVALUATION

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

BOARD OF EDUCATION
OF
THE CITY OF NEW YORK
1980

HON. JOSEPH G. BARKAN
President

HON. MIGUEL MARTINEZ
Vice President

HON. AMELIA ASHE

HON. ROBERT CHRISTEN

HON. IRENE IMPELLIZZERI

HON. MARJORIE LEWIS

HON. JAMES REGAN

FRANK J. MACCHIAROLA
Chancellor

RICHARD F. HALVERSON
Deputy Chancellor

FINAL EVALUATION REPORT

FORT HAMILTON HIGH SCHOOL

PROJECT GRASP

ESEA TITLE VII

1979-1980

Principal:

Mr. Diego Coscarelli

Coordinator:

Ms. Gertrude Berns

Prepared By:

Ruddie A. Irizarry
Evaluation and Planning Manager
Office of Educational Evaluation

Judith A. Torres
Evaluation and Planning Specialist
Office of Educational Evaluation

Assisted By:

Emily Comstock Di Martino, Consultant

Frank O'Brien, Ph.D., Consultant

NEW YORK CITY PUBLIC SCHOOLS

OFFICE OF EDUCATIONAL EVALUATION

RICHARD GUTTENBERG

ADMINISTRATOR

TABLE OF CONTENTS

	PAGE
Context	1
Program Description	2
Funding Sources	5
Bilingual Classes	9
Mainstream Classes	10
Curriculum and Materials Development	11
Staff Development	14
Parental and Community Involvement	14
Affective Domain	15
Supportive Services	16
Findings	18
Conclusions and Recommendations	50

LIST OF TABLES

		PAGE
TABLE I	Bilingual Students by Language Group.....	5
TABLE II	Bilingual Staff by Funding Source.....	6
TABLE III	Personnel Providing Non-Instructional Services Under Title VII.....	7
TABLE IV	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Greek Speaking Students)	22
TABLE V	Student Performance on the CREST by Test Level and Grade (Greek Speaking Students)	23
TABLE VI	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Arabic Speaking Students)	24
TABLE VII	Student Performance on the CREST by Test Level and Grade (Arabic Speaking Students).....	25
TABLE VIII	Results of the CREST Reporting the Number and Percent of Objectives Mastered (Spanish Speaking Students)	26
TABLE IX	Student Performance on the CREST by Test Level and Grade (Spanish Speaking Students)	27
TABLE X	English Reading Achievement (Greek Speaking Students).....	28
TABLE XI	English Reading Achievement (Arabic Speaking Students).....	29
TABLE XII	English Reading Achievement (Spanish Speaking Students)	30
TABLE XIII	Spanish Reading Achievement	31
TABLE XIV	Mathematics Achievement (Greek Speaking Students).....	32
TABLE XV	Mathematics Achievement (Arabic Speaking Students).....	33

LIST OF TABLES
(continued)

		PAGE
TABLE XVI	Mathematics Achievement (Spanish Speaking Students)	34
TABLE XVII	Mathematics Performance (Greek Speaking Students)	35
TABLE XVIII	Mathematics Performance (Arabic Speaking Students)	36
TABLE XIX	Mathematics Performance (Spanish Speaking Students)	37
TABLE XX	Science Achievement (Greek Speaking Students)	38
TABLE XXI	Science Achievement (Arabic Speaking Students)	39
TABLE XXII	Science Achievement (Spanish Speaking Students)	40
TABLE XXIII	Social Studies Achievement (Greek Speaking Students)	41
TABLE XXIV	Social Studies Achievement (Arabic Speaking Students)	42
TABLE XXV	Social Studies Achievement (Spanish Speaking Students)	43
TABLE XXVI	Native Language Arts Achievement (Greek Speaking Students)	44
TABLE XXVII	Native Language Arts Achievement (Spanish Speaking Students)	45
TABLE XXVIII	Spanish Typing	46
TABLE XXIX	Attendance Rates for Greek Speaking Students	47
TABLE XXX	Attendance Rates for Arabic Speaking Students	48
TABLE XXXI	Attendance Rates for Spanish Speaking Students	49

GREEK, ARABIC AND SPANISH (GRASP)

BILINGUAL PROGRAM

FORT HAMILTON HIGH SCHOOL

Location:	8301 Shore Road, Brooklyn, N.Y. 11209
Year of Operation:	1979-80, Fifth and final year of funding
Target Languages:	Greek, Arabic and Spanish
Number of Participants:	210 (40 Greek, 50 Arabic, 120 Spanish)
Principal:	Mr. Diego Coscarelli
Coordinator:	Ms. Gertrude Berns

CONTEXT

Fort Hamilton High School is located in the Bay Ridge area of Brooklyn, a middle class to upper middle class area. The immediate neighborhood of Fort Hamilton High School is characterized by single family homes with well-kept lawns and tree-lined streets. However, the program target population is comprised of upper-lower and lower-middle class students and is fairly stable.

Fort Hamilton High School has a school enrollment of approximately 3,500 students. Of these 11.9% are Black, 5.0% are Asian, 23.0% are Hispanic and 60.1% are "Other," principally White. The following chart gives a comparison between 1976 and 1979 and the percentages of each ethnic group.

ETHNIC GROUP	% 1976	% 1979
American Indian	0.0	0.1
Asian	2.8	5.0
Hispanic	15.9	23.0
Black	12.5	11.9
White	68.8	60.0
TOTAL	100.0	100.0

Approximately 21% , or about 850 students travel to the school from ghetto areas. About half of this group is of Hispanic origin. The school also serves approximately 200 Greek and Arabic dominant students. The former live in the vicinity of the school, while the latter commute from downtown Brooklyn. Nearly 600 students, or 15% of the school population, have been identified as being non-English dominant. Based on 1980 figures, 424 students are free lunch eligible, and 987 receive norm aid to families with dependent children.

PROGRAM DESCRIPTION

As this is the fifth and final year of funding for Project GRASP it is important to note that this is a mature and stable bilingual program. As such, there would of necessity be few major alterations from year to year. On the other hand, it is certainly worth describing the changes which have occurred in the 1979-1980 school year in the bilingual program at Fort Hamilton High School. First, the project director has been promoted to the position of Assistant Principal for Foreign Language Instruction. While she has retained

her position of director of the bilingual program she has been aided significantly by the assistant project director. Secondly, there were changes in course offerings. The physics curriculum in Greek was completed and formalized as was English Vestibule, which is for the student who has completed ESL but is not quite ready for regular English. The Spanish Current Social Issues course was updated and made more relevant to the needs of the students. Thirdly, the preceding chart on percentages of ethnic groups clearly indicates two changes in population distribution. The percentage of Hispanics rose by 7.1 and the percentage of students of Asian origin nearly doubled, from 2.8% in 1976 to 5.0% in 1979. This is particularly significant, as Fort Hamilton is applying for new bilingual Title VII funding under career education, to which the increase in the Hispanic enrollment adds a greater thrust. Additionally, a Chinese component has been incorporated into the new proposal in order to serve at least some of the 175 Asian students.

The final and most obvious change is that, since this is the last year of funding, plans have had to be made to manage without any federal funds at all and yet maintain the program. Ft. Hamilton High School plans to develop a bilingual career educational program if federal funds are allocated.

Over the past five years, the Fort Hamilton Bilingual Program has been designed to offer bilingual instructional supportive services to high school students of limited English proficiency (LEP). The program presently serves approximately 210 LEP students of Greek (40 students), Arabic (50 students) and Spanish (120 students) backgrounds. Of the Spanish students 50% are from Puerto Rico, 20%

from Central America and 30% from the Dominican Republic. The Greek, Arabic and Spanish groups represent the largest number of LEP students at Fort Hamilton High School.

Students receive intensive instruction in English, either English as a Second Language or English Reading; instruction in the native language (except Arabic); and content area instruction in the native language in the areas of Science, Social Studies and Mathematics. Students also participate in mainstream program classes, depending on the language requirements of the class and the student's English language competence. Through mainstream program classes and participation in lunchroom and assembly programs the students are integrated with the general school population.

The bilingual program is funded by local tax levy monies and ESEA Title VII funds. The tax levy funds principally support the instructional staff and the project director. ESEA Title VII funds support the project assistant director, three resource teachers (one in each language) and the teacher trainer, as well as three paraprofessionals and a secretary. The Title VII funds also support the materials/curriculum development/adaptation efforts, teacher training activities, supportive services, and parental involvement. All of these, as well as the instructional component, will be discussed in detail in the body of the report.

The GRASP Program at Fort Hamilton High School is the only bilingual high school program in the United States serving Greek and Arabic speaking students. Because of this unique feature a great deal of interest in the program has been demonstrated. Many inquiries have been received from all parts of the country concerning materials, methods of instruction and cultural events sponsored by

the project. Therefore the contribution made by GRASP to bilingual education is greater than those services received by the participating students and evident in this report.

The other unique feature is that it is a port of entry school for children from smaller countries of origin such as Lebanon and Yemen. This means the staff must remain au courant of educational and familial practices in these areas in order to assess the educational and psychological strengths and weaknessess of the students. The range of proficiency in English varies from non-existent in many port of entry students to some oral proficiency in others. Sixty per cent of the target students come from within the school with the other 40% being new arrivals.

Table I summarizes the number of students served by the bilingual program.

TABLE I

Bilingual Students by Language Group

Language	# of Students	Percentages
Spanish	120	57%
Arabic	50	24%
Greek	40	19%
Total	210	100%

FUNDING SOURCES

As stated above, the Ft. Hamilton program is supported by tax levy and ESEA Title VII funds. Title VII principally supports non-instructional support services and three paraprofessionals while tax levy funds support program teachers and one paraprofessional. The following table gives a breakdown of bilingual program staff by funding source.

TABLE II

Bilingual Staff by Funding Source

Funding Source	Instructional Staff	Non-Instructional Staff
Title VII	3 Paraprofessionals	1 Project Asst. Director
		3 Resource teachers
		1 Teacher Trainer
		1 Secretary
Tax Levy	9 Teachers	1 Project Director
	1 Paraprofessional	

Students participating in the program receive English language development courses, instruction in content areas in the native language as well as the study of Greek and Spanish, and mainstream courses.

The English language instructional component, composed of ESL and English reading classes, is supported wholly with tax levy funds. Bilingual program students participated in four (4) ESL classes and seven (7) English reading classes. Students were grouped together for English language instruction regardless of native language, and participated with mainstream students in the reading classes.

Native language instruction was provided in the content areas of mathematics, social science, and science for all language groups. In addition, Greek and Spanish students participated in native language arts classes. Spanish typing and commercial Spanish courses were also provided under the program. These native language classes were principally supported by tax levy funds, while Title VII provided three

paraprofessionals. However, because of insufficient numbers of teachers in each language group who were prepared to provide instruction in each of the content areas offered under the program, resource teachers in each language were able to support and provide instructional services. This was mainly true for Arabic language classes, where a qualified teacher had not been identified. Thus the program was able to maximize the number and range of options in native language instruction available for program students.

Title VII funds were mainly used to support non-instructional or instructional support services. The following table delineates these non-instructional services and the staff members who provided them.

TABLE III

Personnel Providing Non-Instructional Services Under Title VII

Component	Personnel
Curriculum Development	3 Resource Teachers-Greek/Arabic/Spanish
Counseling	Asst. Project Director, 3 Resource Teachers
Staff Development	Asst. Project Director, Teacher Trainer
Parental Involvement	All Staff
Administration/Management	Asst. Project Director

A principal and essential feature of the program revolved around the support services, beyond instructional, provided by the resource teachers. In a program serving three language groups, their roles and linguistic capacity made a valuable contribution towards the development of a program of high quality. Among the services provided by the resource teachers were the following:

a. Supplying classroom teachers with materials and instructional aids in their respective languages;

b. Demonstrating to the classroom teachers the application and implementation of materials;

c. Extending assistance to individual students;

d. Maintaining close contact with parents;

e. Acting as liaisons with college advisors, guidance counselors, deans and other school personnel;

f. Translation and adaption of texts and other instructional materials;

g. Development of resource materials in the three target languages.

Similarly, the paraprofessionals funded principally with Title VII funds, played a critically important role. Their primary function was working in the classroom as assistants to the teachers, thus facilitating the individualization of instruction which was necessitated by the wide range of linguistic abilities of the student population. Under the supervision of teachers they also tutored students with special problems on a one-to-one basis. Among their other responsibilities were assisting teachers with clerical chores, such as duplicating materials, maintaining student profiles, sorting and cataloging materials, maintaining bulletin boards, scoring tests, etc.

BILINGUAL CLASSES

All students received instruction in English and Physical Education. Beyond that their programs varied greatly according to individual interests, abilities, progress, grades and graduation requirements. Pupils may be enrolled in one to three bilingual classes with the remaining periods distributed throughout the school's regular instructional program. Since each student carried at least six periods per day, ample opportunity was provided for integration with English dominant pupils. Each Title VII student was interviewed by the project director or assistant director and placed in classes suitable to his/her individual needs. The program has remained committed to offering the bilingual program students educational opportunities parallel to those offered in the mainstream program of the school.

Bilingual instruction was distributed in the following way:

Greek

American Studies
Economics
Contemporary Social Issues
Western Civilization
Algebra
Commercial Math
Geometry
Biology
Physics

Arabic

Algebra
American Studies
Fundamental Math
Commercial Math
Economics
Western Civilization

Spanish

American Studies

Economics

Contemporary Social Issues

Algebra
Commercial Math
Fundamental Math
Geometry

Chemistry

Environmental Science

Health Science

Commercial Spanish

Spanish Typing

Native Language Arts

All students received instruction in English, either through classes in ESL and/or Reading in English. For example, a recent arrival could be taking up to two periods of ESL daily. A student who had reached a certain level of English proficiency could be taking one ESL period a day and one class of Reading in English with a partially mainstreamed class (50% bilingual; 50% English dominant). This year Project GRASP instituted a new course offering, English Vestibule (EV) for the student who has outgrown ESL and is not quite ready for regular English. About 30% of the students have completely finished ESL, but continue to receive content area instruction in their native language.

MAINSTREAM CLASSES

The project director and/or assistant director reviewed and analyzed each student's folder periodically and at the end of his/her participation in the program. In this way a decision could be made for students to be completely or partially mainstreamed, based on their proficiency in English and achievement in subject areas. Twenty students who met the exit requirements were placed in the school's mainstream program. The students and their parents were notified and invited to individual conferences to discuss the change and its implications

in the student's remaining time in the school. Students exiting the program are encouraged to continue to use the bilingual library and resource center and to seek help from the program staff, if needed.

Very few students exit the program for reasons other than having met the requirements, as it is a prestigious and familial environment. Last year, 50 students graduated, 24 left the program under parental option, 15 left for reasons of mobility, and a few for miscellaneous reasons (dropouts, marriage, work, etc.)

Most students enter the program at tenth grade and are fully or partially mainstreamed by twelth grade. Remarkably, all graduate on time.

During the 79/80 school year a considerable number of students have been partially mainstreamed. Students who, upon a teacher's recommendation and on the basis of progress demonstrated on tests, are able to function in some subject classes outside of the bilingual program were placed there. For instance, approximately 55 students were enrolled in mainstream English reading classes, and about 20 students were taking mainstream Math classes.

The project director kept in touch with mainstreamed students. Their new grade advisor was in constant communication with the project director.

CURRICULUM AND MATERIALS DEVELOPMENT

One of the major functions of GRASP has been the development of instructional materials of all types. Although some texts, audiovisual and testing materials have been available commercially in Spanish, a great deal of work has been done to develop supplementary materials suited to the instructional program. English

texts and materials were adapted and translated to provide tools equivalent to those used in the mainstream program and to supplement commercial texts, tests and materials that have been purchased.

There was a dearth of commercial materials for the Greek and Arabic components. The project director, after exploring various lists and brochures advertising texts and other educational materials, found that said materials were, in reality, unobtainable. Consequently, all teaching aids, tests and written materials were produced by the resource teachers. Units of instruction in all courses taught were created on an ongoing basis, as were evaluative instruments and supplementary materials. Again, the models were English texts, tests and materials used in equivalent courses which were translated, adapted and modified for the specific exigencies of the instructional program of GRASP.

The following Resource Units were completed by the end of the 79/80 school year. Units completed during the 1979-80 school year are indicated by an asterisk.

Spanish	ESL
Chemistry I	*English Vestibule
American Studies I	
*CSI (Current Social Issues) - Update	
Economics	
Environmental Science	
Biology	

Greek	Arabic
Applied Science I	American Studies I
Applied Science II	Western Civilization I
Western Civilization I	Earth Science
*Physics	Algebra

These resource units, while serving as teacher aids, were duplicated and distributed to the students as basic or supplementary course materials.

All materials, courses of study and evaluative items created and developed by the program staff have been, upon completion, disseminated to the Resource Center of the Office of Bilingual Education in New York City and New York State, the Dissemination Center for Bilingual Bicultural Education Center in Austin, Texas, and other interested parties.

STAFF DEVELOPMENT

The 15% of the budget allotted for training this year has continued to be utilized to develop staff on the theoretical as well as practical levels. Five staff members attending local colleges took courses which focused on the various theories and practices of bilingual education. This formal training took place in the fall and spring semesters of the current year, and is projected to lead two staff members to the achievement of a Master's Degree.

The practical phase of the staff development program, which proved most beneficial last year and was continued this year through February, 1980, was an in-service and on-site training program carried out by the teacher trainer under the supervision of the project director. In February, however, the teacher trainer left Fort Hamilton High School. As this was the last year of funding, as the program had been well established, and as pay requirements for the staff had increased, the funds allocated for the teacher trainer for March through June were used to meet the legal pay demands of other staff members.

One of the project director's long range objectives is to compile a teacher trainer manual (focused on bilingual education) based on the minutes of staff workshops. The bilingual staff, additionally, met once a month. These meetings were parallel to those meetings of the school personnel in general. Their main objectives were to disseminate information as to the implementation of school policies, and to solve internal problems.

PARENTAL AND COMMUNITY INVOLVEMENT

The Parent Advisory Council of the Fort Hamilton High School bilingual program did not meet as often as had been planned. However, its 12 members

attended several meetings during the year. The parents discussed at the opening meeting the state of the program and expressed great satisfaction with the progress of their children. The following two meetings dealt with general school procedures and a review of the continuation proposal respectively. Parents were informed of the impact of the projected new proposal on the future structure of the program. The consensus among the Parent Council members was that their children have made considerable strides in English as well as in the content areas.

In view of the trilingual nature of the program, Parent Council meetings have been somewhat awkward. Much of the discussion had to be translated three times. Limited materials were handed out in translation to enable parents to follow the meetings more effectively. Additional problems were confronted in timing for the meetings. Many of the Greek parents owned and/or operated restaurants and as such were unable to attend evening meetings. Alternatively, many Spanish and Arabic parents worked daytimes and would have to travel at night some distance to attend meetings.

In addition to the regular meetings, the program staff has continued to make every effort to maintain frequent school-home contact. Parents were contacted by telephone, home visits or letters in the native language whenever the occasion for parental input or involvement arose. Parents were referred to ESL classes for adults whenever they expressed the desire to further their education.

AFFECTIVE DOMAIN

Bilingual students were active in the school's special extracurricular program and contributed to the school's special activities. Approximately eighty

are members of various clubs and teams. Students participated in language clubs and in school-wide sports. This year the Fort Hamilton High School presented an International Music and Dance Festival in which both mainstream and bilingual students participated. Approximately 1000 people attended.

There were 50 bilingual graduates in January and June 1980, among whom many decided to go on to college. These 50 graduates brought the total number of graduates to 162 in the five years of the program's existence.

During the last school year the dropout rate among bilingual students was 4%, while the rest of the school's dropout figure stood at 16%.

There were no instances of vandalism during the 1979-1980 school year, and no suspensions among students in the bilingual program. A positive attitude toward the program has been manifested by students in visits to the bilingual office and in conversations with their resource teachers.

In addition, the attendance rate of program students as a whole substantially surpassed the school-wide attendance rate. (See Tables XXIX, XXX and XXXI.)

SUPPORTIVE SERVICES

The Fort Hamilton High School bilingual program did not have a guidance counselor or a community relations worker. Nevertheless, certain support services were provided.

Whenever it became necessary, parents were contacted by letter or phone. All school notices were translated in the three target languages. If a serious problem arose, one of the three resource teachers visited the homes of the students.

Individual guidance was provided on an on-going basis by the project director, assistant director and resource teachers. Group guidance took place whenever a "mini-assembly" was called to deal with a particular problem. College and employment advisement were provided for groups and to individuals. Hostos Community College, Lehman and Kingsborough Community colleges have been contacted. Graduating seniors were taken to visit each campus. They were encouraged to apply to the college of their choice.

Tutoring took place all through the school year. Students were tutored collectively or on a one-to-one basis depending on their needs. Tutoring was provided for the Basic Competency Tests. Tutoring was provided by Resource Teachers and/or the paraprofessionals. Close to 25 students participated in the Work-Study Program.

FINDINGS

The following section presents the assessment instruments and procedures, and the results of the testing.

Assessment Procedures and Instruments:

Students were assessed in English Language development, growth in their mastery of their native language, mathematics, social studies and science. The following are the areas assessed and the instruments used:

English as a Second Language	--	Criterion Referenced English Syntax Test (CREST)
Reading in English	--	Metropolitan Achievement Test
Reading in Spanish	--	Inter-American Series Prueba de Lectura
Mathematics Achievement	--	NYC Computation Test
Mathematics Performance	--	Teacher-made tests
Science Performance	--	Teacher-made tests
Social Studies Performance	--	Teacher-made tests
Native Language Arts Performance	--	Teacher-made tests
Spanish Typing	--	Teacher-made tests
Attendance	--	School and Program records

The following analyses were performed:

A) On pre/post standardized tests of English and Native language reading achievement, and Mathematics achievement statistical and educational significance are reported:

1) Statistical Significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant.

   This analysis does not represent an estimate of how students would have performed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

2) Educational Significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.[1]

---

[1] Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977, Chapter 2.

An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = small ES
a difference of 1/2 = .50 = medium ES
a difference of 4/5 = .80 = large ES

B) On the Criterion Referenced English Syntax Test (CREST) information is provided on the number of objectives attempted and mastered, the percentage of objectives mastered versus those attempted, and the number of objectives mastered per month of treatment. Information is also provided on student performance on the various test levels.

C) The results of the criterion referenced tests in mathematics, social studies, science, native language arts and typing (Spanish) and percent of students achieving the criterion levels set for the participants (60% passing).

D) Information is provided on the attendance rate of students participating in the bilingual program, compared with that of the total school population.

The following pages present student achievement in tabular form.

TABLE IV

English as a Second Language

for Greek Speaking Students

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	1	----------NO DATA----------				
10	5	11.8	11.6	98%	10	1.2
11	3	14.7	13.0	88%	10	1.5
12	6	9.8	9.0	92%	9.5	1.0
Totals	14	12.2	10.8	93%	9.8	1.2

As seen in Table IV, the combined group of Greek-speaking students attempted an average of 12.2 objectives and mastered 10.8 objectives on the average on the Criterion Referenced English Syntax Test (CREST) which equals a 93% mastery rate. Students received treatment for 9.8 months on the average, and mastered 1.2 objectives per month on the average. The average number of objectives mastered ranged from 9.0 in grade 12 to 13.0 in grade 11. The average number of objectives mastered per month ranged from 1.0 in grade 12 to 1.5 in grade 11.

TABLE V

English as a Second Language

for Greek Speaking Students

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

Grade	# of Students	LEVEL I			LEVEL II			LEVEL III		
		Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	1	----------			NO DATA			----------		
10	5	----------			27	26	96%	32	32	100%
11	3	18	18	100%	9	9	100%	17	12	71%
12	6	9	9	100%	9	7	78%	41	38	93%
Total	14	27	27	100%	45	42	93%	90	82	91%

Table V presents the CREST test levels at which Greek speaking students were performing, by grade. The combined totals indicate that the majority of students functioned primarily at the intermediate (Level II) and advanced levels (Level III), and that students mastered over 90% of the objectives attempted at all three test levels. Within grades, the results show that students functioned principally at the upper levels.

TABLE VI

English as a Second Language

for Arabic Speaking Students

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	13	9.5	8.0	84%	6.8	1.2
10	4	12.8	12.5	98%	10.0	1.3
11	6	9.8	7.5	77%	8.8	.8
12	6	10.0	10.0	100%	8.5	1.2
Total	29	10.1	8.9	88%	8.0	1.1

As seen in Table VI , the combined group of Arabic-speaking students attempted an average of 10.1 objectives and mastered an average of 8.9 objectives on the Criterion Referenced English Syntax Test (CREST) which equals an average of 88% objectives mastered. For an average of 8 months of treatment, 1.1 objectives were mastered per month on the average. The average number of objectives mastered ranged from 7.5 in grade 11 to 12.5 in grade 10. On the average, .8 objectives were mastered per month in grade 11 to 1.3 objectives mastered per month in grade 10.

TABLE VII

English as a Second Language

for Arabic Speaking Students

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	13	49	31	63%	27	25	93%	50	46	92%
10	4	9	9	100%	18	18	100%	24	23	96%
11	6	9	2	22%	9	9	100%	41	34	83%
12	6	9	9	100%	27	27	100%	24	24	100%
Total	29	76	51	67%	81	79	98%	139	127	91%

Table VII presents the CREST Test levels at which students were performing, by grade. The group totals indicate that the majority of students were functioning at the upper levels (II and III) on the CREST. Overall students who were functioning at these levels mastered over 90% of the objectives they attempted. The data for individual grade levels show the same percentages. The bulk of the students functioned at the upper test levels and demonstrated mastery of very high levels. Students in grades 9 and 11 mastered less objectives on Level I than students who attempted objectives on Levels II and III within the same grade level. Overall, most students functioned successfully at the intermediate and advanced test levels.

TABLE VIII

English as a Second Language

for Spanish Speaking Students

Results of the Criterion Referenced English Syntax Test (CREST) Reporting the Number of Objectives Mastered, Percent Mastered, and Objectives Mastered Per Month.

Grade	# of Students	Average # of Objectives Attempted	Average # of Objectives Mastered	% Mastered/ Attempted	Average Months of Treatment	Objectives Mastered Per Month
9	27	11.8	9.4	80%	8.2	1.1
10	27	11.4	9.4	83%	9.0	1.0
11	18	12.8	10.7	84%	8.8	1.2
12	14	12.6	11.5	91%	9.1	1.3
Total	86	12.0	10.0	83%	8.7	1.2

As seen in Table VIII, the combined group of Spanish-speaking students attempted an average of 12 objectives and mastered an average 10 objectives on the Criterion Referenced English Syntax Test (CREST) which equals an average of 83% objectives mastered. For an average of 8.7 months of treatment, 1.2 objectives were mastered per month on the average. The average number of objectives mastered ranged from 9.4 in Grades 9 and 10 to 11.5 in Grade 12. The average number of objectives mastered per month ranged from 1.0 objective per month in Grade 10 to 1.3 objectives mastered per month in Grade 12.

TABLE IX

English as a Second Language

for Spanish Speaking Students

Student Performance on the
Criterion Referenced English Syntax Test (CREST)
A Breakdown by Test Level and Grade.

		LEVEL I			LEVEL II			LEVEL III		
Grade	# of Students	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered	Attempted	Mastered	Percent Mastered
9	27	123	100	81%	72	54	75%	123	101	82%
10	27	59	53	90%	112	102	91%	137	99	72%
11	18	40	25	63%	108	103	95%	82	65	79%
12	14	9	9	100%	78	78	100%	90	74	82%
Total	86	231	187	81%	370	337	91%	432	339	78%

Table IX presents the CREST Test levels at which students were performing, by grade. In grade 9, most students were performing at Levels I and III. Students in grades 10 through 12 were performing principally at the Intermediate (II) and Advanced (III) Levels. The percentage of attempted objectives that was mastered indicates a complex grade and Test-Level relationship. The results for the total group indicate that most students performed at the upper test levels. The highest mastery rate occured for students attempting Level II objectives (90%). Students mastered approximately the same percentage of objectives on Levels I (81%) and III (78%).

TABLE X

English Reading Achievement

Greek Speaking Students

Significance of the Mean Grade Equivalent Differences Between Actual and Predicted Achievement for Students with Full Instructional Treatment taking English in Mainstreamed Classes on the Metropolitan Achievement Test, Form G

		Predicted		Actual						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pred./ Act.	t	p	ES
9	-	-	-	-	NO DATA -	-	-	-	- -	
10	3	7.3	.73	7.6	.60	.23	.97	2.06	NS	1.19
11	3	8.3	1.04	8.6	.47	.30	.18	.49	NS	.28
12	4	8.0	.46	8.6	.83	.60	.91	2.64	.05	1.32

Table X shows average observed post-test English reading achievement in grade equivalents on the Metropolitan Achievement Test, Form G of Greek-speaking students who participated in mainstreamed English classes and the predicted average post-test grade achievement levels derived from the historical regression procedure. As seen in Table X , students in the 10th grade showed a gain of 2.3 school months beyond expectation, a gain that was statistically significant at the .05 level. The 2.3 month gain, however, was large when expressed in standard deviation units. Grade 11 students showed a 3 school month gain that was not statistically significant and of minimal practical significance. Twelfth grade students showed more than one-half of a years' growth (6.0 school months) which was statistically significant and of substantial educational significance. The above results must be interpreted cautiously due to the very small sample sizes evident at all grade levels.

TABLE XI

English Reading Achievement

Arabic Speaking Students

Significance of the Mean Grade Equivalent Differences Between Actual and Predicted Achievement for Students with Full Instructional Treatment taking English in Mainstreamed Classes on the Metropolitan Achievement Test, Form G

		Predicted		Actual						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pred-Act.	t	p	ES
9	----------	----------	NO DATA	----------	----------	----------	----------	----------	----------	----------
10	1	6.7		8.3		1.6				
11	2	6.3		6.9		.6				
12	1	8.6		8.7		.1				

The small sample sizes presented in Table XI made it impossible or meaningless to compute inferential statistics for English Reading Achievement scores among Arabic speaking students. Hence, no meaningful evaluation could be made of growth in English reading achievement for Arabic speaking students.

TABLE XII

English Reading Achievement

Spanish Speaking Students

Significance of the Mean Grade Equivalent Differences between Actual and Predicted Achievement for Students with Full Instructional Treatment Taking English in Mainstreamed Classes on the Metropolitan Achievement Test, Form G

		Predicted		Actual						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pred-Act.	t	p	ES
9	1	---------- insufficient data ----------								
10	7	8.0	.61	8.2	.68	.2	.75	1.14	NS	.43
11	9	7.1	.67	7.5	.62	.4	.93	4.72	.001	1.57
12	6	7.5	.86	8.0	.74	.5	.99	8.76	.001	3.58

Table XII shows average observed post-test English reading achievement in grade equivalent units on the Metropolitan Achievement Test, Form G of Spanish-speaking students who participated in mainstream English classes and the predicted average post-test grade equivalent achievement levels derived from the historical regression procedure. As seen in Table XII, students in grade 10 achieved 2 school months of growth in grade equivalent units beyond expectation. This gain was not statistically significant. Expressed in standard deviation units, the gain of 10th grade students was small to moderate. Grade 11 and 12 students, respectively, showed 4 school months and 5 school months of reading achievement gains beyond expectation. Each gain was statistically significant beyond the .001 level of significance. In addition, the ES indices denote significant growth beyond expectation that was of substantial educational significance.

TABLE XIII

Spanish Reading Achievement

Significance of the Mean Raw Score Differences Between Initial and Final Test Scores for Students with Full Instructional Treatment on the CIA, Prueba de Lectura, Level III

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
9	16	61.9	23.3	77.7	26.3	15.8	96	7.95	.001	1.99
10	25	53.3	26.1	69.8	24.8	16.5	.90	7.31	.001	1.40
11	19	59.5	25.9	71.1	21.9	11.6	.68	2.59	.025	.59
12	15	66.7	31.3	90.7	31.3	24.0	.80	4.68	.001	1.21

Spanish speaking students at all grade levels made statistically significant improvements in reading achievement on the Prueba de Lectura, Level III. Gains ranged from 12 points in grade 11 to 24 points in grade 12. When expressed in standard deviation units, the gains ranged from .59 in grade 11 to 1.99 in grade 9. Test-retest correlations were moderate to high. Overall, students showed statistically significant and meaningful improvement in Spanish Language Reading Achievement.

TABLE XIV

Mathematics Achievement

Greek Speaking Students

Significance of Mean Raw Score Differences Between Initial and Final Test Scores for Students with Full Instructional Treatment on the Mixed Fundamentals Subtest of the NYC Arithmetic Computation Test

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
9	1	----------	----------	----------	Insufficient Data	----------	----------	----------	----------	----------
10	7	14.4	8.6	29.0	8.9	14.6	.96	15.8	.001	5.97
11	----------	----------	----------	----------	NO DATA	----------	----------	----------	----------	----------
12	2	----------	----------	----------	Insufficient Data	----------	----------	----------	----------	----------

Students in grade 10 improved 15 points from pre-test to post-test, a gain that was very highly significant. Post-test achievement was approximately 6 standard deviation units greater than pre-test achievement. Although the sample was small, students demonstrated growth in Mathematics that was unusually large. No meaningful statistical analysis was possible for students in grades 9, 11, 12 due to inadequate sample sizes.

TABLE XV

Mathematics Achievement

Arabic Speaking Students

Significance of the Mean Raw Score Differences Between Initial and Final Scores for Students with Full Instructional Treatment on the Mixed Fundamentals Subtest of the NYC Arithmetic Computation Test

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
9	4	11.0	8.6	24.5	11.6	13.5	.60	2.87	.05	1.44
10	2	14.0		39.5		25.6				
11	1	----------Insufficient Data----------								
12	3	14.7	13.0	23.0	10.0	8.3	.99	4.11	.05	2.37

Arabic speaking students demonstrated statistically significant growth in Mathematics achievement on the NYC Arithmetic Computation Test (Mixed Fundamentals) in grade 9 and 12. The mean gain for 9th grade students was 13.5 points and 8.3 points for 12th grade students. The observed gains which exceeded one standard deviation, were judged to be educationally meaningful. Grades 10 and 11 did not offer a sufficient number of students to make statistical analysis meaningful.

TABLE XVI

Mathematics Achievement

Spanish Speaking Students

Significance of the Mean Raw Score Differences Between Initial and Final Scores for Students with Full Instructional Treatment on the Mixed Fundamentals Subtest of the NYC Arithmetic Computation Test

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre-Post	t	p	ES
9	16	6.4	2.5	23.1	7.8	16.7	.45	9.43	.001	2.36
10	14	9.1	7.6	22.4	10.9	13.3	.65	5.98	.001	1.60
11	1	----------	----------	insufficient data	----------	----------	----------	----------	----------	----------
12	6	8.0	2.9	19.8	7.6	11.8	.80	5.21	.001	2.13

Students in grades 9,10 and 12 demonstrated Mathematics achievement gains that were statistically significant at a high level of significance. Mean score gains ranged from 12 points in grade 12 to 17 points in grade 9. The observed gains, expressed in standard deviation units, were judged to be substantial. Thus, students achieved at substantial levels of statistical and educational significance.

TABLE XVII

Mathematics Performance

Greek Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Mathematics

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	----------NO DATA----------					
10	9	8	89%	9	6	67%
11	3	3	100%	1	1	100%
12	5	5	100%	4	4	100%

The percent of Greek speaking students passing teacher-made Mathematics exams in Fall was 79% in grade 10 and 100% in grades 11 and 12. In Spring, 67% of 10th grade students showed mastery and all students in grades 11 and 12 demonstrated mastery.

TABLE XVIII

Mathematics Performance

Arabic Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Mathematics

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	4	3	75%	3	3	100%
10	4	2	50%	2	2	100%
11	1	1	100%	2	0	0%
12	4	3	75%	3	3	100%

On Fall testing, Arabic-speaking students showed mastery rates in Mathematics that ranged from 50% in grade 10 to 100% in grade 11. In the Spring, no 11th grade student passed teacher-made tests, and all students in grades 9,10 and 12 showed mastery. At all grade levels except grade 11, a higher rate passed exams in Spring than in Fall.

TABLE XIX

Mathematics Performance

Spanish Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Mathematics

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	25	19	76%	20	20	100%
10	26	14	54%	24	11	54%
11	4	2	50%	7	4	57%
12	7	7	100%	6	6	100%

Spanish-speaking students showed mastery levels in Fall in Mathematics examinations that ranged from 50% in grade 11 to 100% for 12th grade students. In Spring, the percent passing Mathematics exams ranged from 54% in grade 10 to 100% in grade 12. In all grades the percent passing Spring exams equals or exceeds the percent passing in Fall.

TABLE XX

Science Achievement

Greek Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Science

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	1	0	0%	----------NO DATA ----------		
10	----------NO DATA ----------					
11	6	5	83%	5	4	80%
12	10	10	100%	10	10	100%

The percent of Greek-speaking students passing Science exams in Fall ranged from 0% in grade 9 to 100% in grade 12. In Spring 80% of 11th grade students and 100% of 12th grade students demonstrated mastery in Science.

TABLE XXI

Science Achievement

Arabic Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Science

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	8	4	50%	13	9	69%
10	7	6	86%	6	4	67%
11	8	6	75%	9	7	78%
12	5	5	100%	1	1	100%

In Fall, the percent mastery in Science for Arabic-speaking students ranged from 50% in grade 9 to 100% in grade 12. In Spring, the percent passing ranged from 67% in grade 10 to 100% in grade 12. With the exception of grade 10, a higher percentage of students demonstrated mastery in Spring.

TABLE XXII

Science Achievement

Spanish Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Science

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	14	10	71%	18	13	72%
10	23	16	70%	32	23	72%
11	19	15	79%	20	18	90%
12	15	13	87%	8	7	88%

In Fall, the percentage of Spanish speaking students passing Science exams ranged from 70% in grade 10 to 87% in grade 12. In Spring, the percent passing ranged from 72% in grades 9 and 10 to 90% in grade 11. At all grade levels, a higher percentage passed the science exams in Spring.

TABLE XXIII

Social Studies Achievement

Greek Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Social Studies

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	----------	NO DATA	----------			
10	12	12	100%	11	11	100%
11	5	4	80%	3	3	100%
12	4	4	100%	3	3	100%

Among Greek speaking students taking Social Studies in Fall, the percent passing ranged from 80% in grade 11 to 100% in grades 10 and 12. In Spring, all students in all grades demonstrated mastery.

TABLE XXIV

Social Studies Achievement

Arabic Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Social Studies

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	3	2	67%	10	9	90%
10	5	3	60%	3	2	67%
11	8	7	88%	6	5	83%
12	7	7	100%	3	3	100%

The percent of Arabic-speaking students showing mastery in Social Studies in Fall ranged from 60% in grade 10 to 100% in grade 12. In Spring, the pass rates ranged from 67% in grade 10 to 100% in grade 12. The pass rates in Spring equal or exceed the Fall rates in all grades with the exception of grade 11.

TABLE XXV

Social Studies Achievement

Spanish Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Social Studies

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	1	0	0%	6	4	67%
10	19	12	63%	25	17	68%
11	19	15	79%	21	18	86%
12	12	11	92%	11	11	100%

In Fall, the percentage of Spanish speaking students passing Social Studies exams ranged from 0% (N=1) in grade 9 to 92% in grade 12. In Spring, the percentage passing ranged from 67% in grade 9 to 100% in grade 12. In addition, a higher percentage of students showed mastery in Spring at all grade levels.

TABLE XXVI

Native Language Arts Achievement

Greek Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Native Language Arts

Grade	FALL 1979 N	Number Passing	Percent Passing	SPRING 1980 N	Number Passing	Percent Passing
9	1	0	0%	----------NO DATA ----------		
10	3	2	67%	3	3	100%
11	2	2	100%	1	1	100%
12	1	1	100%	1	1	100%

In Fall, the percent of Greek speaking students showing mastery in Native Language Arts ranged from 0% in grade 9 to 100% in grades 11 and 12. In Spring, all students in grades 10, 11, and 12 demonstrated mastery.

TABLE XXVII

Native Language Arts Achievement

Spanish Speaking Students

Number and Percent of Students Passing

Teacher-Made Examinations in Native Language Arts

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	21	20	95%	26	25	96%
10	35	21	60%	43	27	63%
11	21	15	71%	21	19	90%
12	18	18	100%	11	11	100%

The percent of Spanish speaking students mastering the Native Language Arts curriculum in Fall ranged from 60% in grade 10 to 100% in grade 12. In Spring, the percent passing ranged from 63% in grade 10 to 100% in grade 12. The Spring mastery rates exceeded the Fall rates at all grade levels.

TABLE XXVIII

Spanish Typing

Number and Percent of Students

Passing Teacher-Made Examinations in Spanish Typing

	FALL 1979			SPRING 1980		
Grade	N	Number Passing	Percent Passing	N	Number Passing	Percent Passing
9	6	6	100%	7	7	100%
10	8	4	50%	4	3	75%
11	6	5	83%	4	3	75%
12	3	3	100%	2	2	100%

The percent of Spanish speaking students passing Spanish typing exams in Fall ranged from 50% in grade 10 to 100% in grade 12. In Spring the percent passing was 75% in grades 10 and 11 and 100% in grades 9 and 12. The percent passing in Spring was the same in grades 9 and 12, greater in grade 10, and less in grade 11.

TABLE XXIX

Attendance Rates for Greek Speaking Students
Number and Percent of Students Surpassing the
General School Attendance Rate, Reporting the
Program Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	No. Surpassing Rate	% Exceeding School Rate
9	1	99.0	-	1	100%
10	10	92.7	8.7	9	90%
11	9	87.3	22.3	8	89%
12	12	89.3	15.5	11	92%

The average attendance rate for Greek-speaking students ranged from 87% in grade 11 to 99% in grade 9. The percentage of students surpassing the school-wide attendance rate ranged from 89% in grade 11 to 100% in grade 9. Thus, Greek-speaking students met and substantially surpassed the stated objective for attendance.

TABLE XXX

Attendance Rates of Arabic Speaking Students
Number and Percent of Students Surpassing the
General School Attendance Rate, Reporting the
Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	No. Surpassing Rate	% Exceeding School Rate
9	14	89.9	18.1	13	93%
10	10	86.9	16.1	9	90%
11	8	86.9	13.3	6	75%
12	8	96.1	2.9	8	100%

The average attendance rate for Arabic speaking students ranged from 87% in grades 10 and 11 to 96% in grade 12. The percent exceeding the school wide attendance rate ranged from 75% in grade 11 to 100% in grade 12. Thus, project students met and substantially surpassed the stated objective for attendance.

TABLE XXXI

Attendance Rates of Spanish Speaking Students
Number and Percent of Students Surpassing the
General School Attendance Rate Reporting the
Program Attendance Rate and Standard Deviation

Grade	No. of Students	Average Attendance	Standard Deviation	No. Surpassing Rate	% Exceeding School Rate
9	39	83.7	16.9	29	74%
10	49	73.1	25.4	30	61%
11	33	75.4	24.3	23	70%
12	25	82.2	11.6	18	72%

The average attendance rate ranged from 73% in grade 10 to 84% in grade 9. The percent of program students exceeding the school wide rate ranged from 61% in grade 10 to 74% in grade 9. Thus, project students met and substantially surpassed this objective.

CONCLUSIONS AND RECOMMENDATIONS

Generally the program was implemented as proposed. The school administration has been supportive of the program, a support which has facilitated the co-ordinator's ability to work with the various school departments serving bilingual program students. The program holds a high status in the school as evidenced by the participation of the students in general school activities and honors clubs, and the reluctance on the part of the students to leave the program.

When compared with school-wide figures, bilingual program students were less likely to drop out of school, were more likely to graduate, had higher attendance rates, and were at par in going on to college. A substantial number of students graduated with honors or certificates of merit. Evidence of student support for the program can be derived from the fact that many students, about 10% to 20% who were deemed to be eligible for full mainstreaming requested to remain somehow affiliated with the program, if not with course work, at least with counseling and other supportive services, and participation in program activities. The maintenance of this relationship was frequently supported by the parents. Any comparisons between the GRASP students' and the mainstream students' figures are particularly striking when one considers that the school is 60% white and of middle to upper-middle class socio-economic status.

The curriculum responsibilities in dealing with smaller traditionally underserved language groups, such as Greek and Arabic, are awesome. The staff of Project GRASP has done an impressive job in writing and implementing new curriculum guides each year. Secondly the staff has stayed in very close contact with the students' educational needs through revising or expanding existing courses. The updated course in Contemporary Social Issues and a new course,

English Vestibule, demonstrate the sensitivity and foresight of staff curricular decisions. Most bilingual program content area instruction was conducted in the native language, with staff relying essentially on ESL and English Reading as well as mainstream courses for English language development.

As this was the fifth and final year of funding of Project GRASP under Title VII, great concern was expressed about future program funding. As for the GRASP program, the staff is "set to go in September, with or without additional funding." This evaluator admired the preparations made by the staff for the coming year. Two alternative programs have been devised - one allowing for use of federal monies under a bilingual career training program and one for no additional federal funds. Hopefully federal funds will be made available to the bilingual program at Fort Hamilton as inroads have already been made in career education through Spanish commercial typing and math. Secondly, the Chinese population in the school is increasing and they too, would be eligible to benefit from the experience and expertise of the bilingual staff.

The final recommendation would be that with or without additional funding, efforts should be increased to locate more bilingual teachers, especially Arabic/English teachers. The need is most pressing for teachers who are competent in the Arabic language.

To conclude, it should be noted that the intelligence, diligence and abundant good will and concern for the students on the part of the Project GRASP staff, especially its director and assistant director, have certainly made an enormous impact on the undeniable success of this program.

Fort Hamilton High School

International Music and Dance

Festival

may 30

Program

FORT HAMILTON HIGH SCHOOL
Diego F. Coscarelli, Principal

INTERNATIONAL FESTIVAL

PROGRAM

Concert Band — Conducted by C. Stoner

Song From MASH

Love Theme from "The Godfather"

"La Habanera"

Girls' Chorus — Directed by N. Soo-Hoo

"With a Voice of Singing"

"He's Gone Away"

Spanish Folk Dances — Faculty Advisers: D. Caridi, P. Moeslinger

Panamanian Folk Dance — G. Smith

Greek Folk Dances — P. Vorvolokas

Norwegian Folk Dance — Student Coordinator: L. Maxwell

Polynesian Dances — T. Adams

Specialty Numbers

Interpretive Dance "Savage Lover" S.McLaughlin

Singing Group
"Time in a Bottle" — Directed by N. Soo-Hoo

Modern Dance "It's Suite to be Me"
Faculty Adviser: G.Ruck

Mixed Chorus — Directed by N. Soo-Hoo

"Now Let All The Heavens Adore Thee" (chorale)

"Where Does Summer Go?"

"Elijah Rock" (traditional spiritual)

Chorus Line Headlights

French Can Can — Faculty Adviser: J. Parry

Italian Folk Dance — M. Sammartino

Arabic Dances — S. Khneisser

Specialty Numbers

International Medley on Mandolin — L. Faretra

"Poor, Poor, Pitiful Me" — Singing Group Directed by N. Soo-Hoo

Concert Band — Conducted by C. Stoner

"This One's for You"

"Trumpet Voluntary"
"Gonna Fly Now"

Finale

"It's A Small World After All"

INTERNATIONAL CAFE

SENIOR BAND

Trumpets

Wilfredo Plasencia
John Ricciardi
James Rojas
William Serrano
Bella Tzanides
Kirk Tzanides
George Vetsakos
Jude Walsh

Flutes

Kim Agee
Kathy DeMarco
George Diaz
Jackie McLernan

Saxophones

John DeMartini
Eileen Donnelly
Robert Kream
David Lee
Gilfred Ubina

Clarinets

Antoinette Mendez
Maria Fasano
Jackie Garcia
Kathy Michopoulos
Elizabeth Velasquez

Bass Clarinet

Kenny Ellis

Trombones

Ray Ryan
Mike Tennesen

Drums

John Jones
Albert Nunez

Tuba

Nathaniel Fields

Baritone Horn

Alex Lamartina

MODERN DANCERS

Joanne Boriello
Joyce Brandon
Lisa Byron
Gigi Coffinas
Lynette Davis
Chris DiCarlo
Chris Dontis
Claudie Hatem
Kenya Howard
Karen Jackson
Ann Marie Louis
Ellen Nehme
Kim Nielsen
Yolanda Pena
Carolyn Perez
David Perez
Lisa Rabidoux
Michelle Richards
Jeanine Salumn
Veronica Schlera
Louis Serrano
Helen Sideris
Sheila Spurill
Vilma Ubiles
Dorina Webster

"SUITE TO BE ME"
Choreography by: Gail Rucker and the 4A3 Company
Music for Flute and Jazz Piano by Bollin

Sections:

I. Wake Up and Hang Out
II. Time on my Hands
III. A Little Romance
IV. Which Way to Up
V. Personal Points
VI. Everybody Be

INTERNATIONAL DANCES

NORWEGIAN

Lisa Maxwell
Alice Olsen
Sharon Sagaard

PANAMANIAN

Nilda Edwards
Rosie Girau
Angelica Rose
Laverne Rose
Carola Williams
Pamela Williams
Jacqueline Walker